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MULTIPLE-PURPOSE WATERSHED PROJECTS

Under Public Law 566

- LAND TREATMENT
- FLOOD PREVENTION
- AGRICULTURAL WATER MANAGEMENT
- MUNICIPAL AND INDUSTRIAL WATER SUPPLY
- RECREATION
- FISH AND WILDLIFE
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MULTIPLE-PURPOSE WATERSHED PROJECTS

Under Public Law 566

By Watershed Planning Division, Soil Conservation Service

Experience in hundreds of localities demonstrates that multiple-purpose small watershed projects are an effective means for rural and urban communities to deal with land use and water problems.

Since 1954, when the Watershed Protection and Flood Prevention Act (Public Law 566) was enacted, many rural and urban communities have shown that they can halt unchecked soil erosion and excessive water runoff on rural land, stop destructive floods, improve drainage conditions on land in agricultural production, provide for more efficient irrigation, supply water for growing municipal needs, attract new industries, enhance fish and wildlife resources, and provide developments for recreation.

Small watershed projects have come to mean protecting, managing, improving, and developing the water and related land resources of a watershed up to 250,000 acres in size through a project-type undertaking.

- A project is planned and carried out jointly by local, State, and Federal agencies with the full understanding and support of a large majority of the landowners and citizens of the community.
- It can include many purposes: Flood prevention; agricultural water management; municipal and industrial water supply, both for present and future use; recreation and fish and wildlife development.
- It is based on (1) local initiative and responsibility, (2) Federal technical, cost-sharing, and credit assistance, and (3) State review and approval of local proposals and opportunity for State financial and other assistance.
- It is a combination of soil and water conservation measures on farm and ranch land, other rural land, and public land (land treatment) and structural measures (dams, levees, channels).
- It bridges the resource-development gap between the soil and water conservation work of indi-

vidual landowners and large Federal and State public-works projects for water resource development in major river valleys. The U.S. Department of Agriculture's Soil Conservation Service (SCS) has the primary responsibility for carrying out the small water-

Facts about multiple-purpose watershed projects—how they get started; how they are constructed, financed, operated, and maintained; what the Federal Government does; and what the local people do—are on the following pages.

GETTING STARTED

shed program.

An application for Federal help in developing and carrying out a watershed project can be submitted by any local organization having authority for such activities under State law. The law requires that the project be limited to a watershed area no larger than 250,000 acres.

State agencies and qualified local organizations can *sponsor* or *cosponsor* an application. They include soil and water conservation districts; municipalities; counties; watershed, flood-control, conservancy, drainage, irrigation, or other special-purpose districts; and irrigation and reservoir companies, water users' associations, or similar organizations not operated for profit. Other organizations can *endorse* project applications.

The application includes (1) facts about the size and location of the watershed, (2) description of the land and water problems, (3) details about the work needed, and (4) information about the sponsoring organizations and their source of funds.

Application forms can be obtained from the State agency designated to approve applications for assistance (see list, p. 13), or from the Soil Conservation Service. Completed applications are sent to the designated State agency.

Technical specialists of the Soil Conservation Service, Forest Service, Fish and Wildlife Service, and other agencies may make a field examination of the watershed in company with representatives of the local organizations prior to approval of the application.

If the State agency disapproves the application, there is no further action. If it approves, it sends the application to the SCS State Conservationist. If he determines that it is legally valid, he sends it to the Washington office of the SCS. Receipt of the application is acknowledged by the Administrator of SCS. Further action is dependent upon the availability of planning help and the priority recommendations of the State agency.

When the SCS is able to furnish planning assistance, the State agency is requested to consider all

unserviced applications in the State and to recommend those next in line for help. Each State agency has established criteria that must be met before an application is awarded a high priority rating. If an application meets the following conditions, it will satisfy the criteria of most States:

- 1. Sponsoring local organizations have the legal authority and will use it to meet their commitments for carrying out and maintaining the project.
- 2. Help is desired to achieve full multiple-purpose development of the water and related land resources of the watershed.
- 3. Material progress has been or is being made in applying soil and water conservation measures on individual farms and ranches.
- 4. The proposed project will benefit a substantial number of people.
- 5. Bringing additional land into agricultural production shall not be an objective of the project.
- 6. Interest in and understanding and support of the project is prevalent throughout the watershed.

Certain States, however, may have special criteria. By working closely with their State agency, local organizations can find out what they must do to obtain a high priority rating.

When the State agency gives an application a high priority rating,

the SCS conducts a preliminary investigation of the watershed to determine the physical and economic feasibility of developing a plan to meet the objectives of the sponsoring local organizations. If its findings are unfavorable, no further action is taken.

If favorable, the SCS State Conservationist prepares a work outline for planning the watershed. Sixty days prior to the time he will be able to furnish planning assistance, he requests the SCS Administrator to authorize such help. Ordinarily, planning help is authorized for a number of watersheds at 1 to 2 month intervals. Upon authorization, the SCS State Conservationist will make help available to start preparing a watershed work plan.

MAKING THE WORK PLAN

An SCS watershed planning staff composed of engineers, hydrologists, geologists, economists, and other needed specialists is assigned to work with the local SCS representative to help the sponsoring organization develop a watershed work plan. The Forest Service also assists. The Farmers Home Administration works with the local organization when it wishes to obtain a watershed loan. The Fish and Wildlife Service makes studies relating to the impact of the proposed project on fish and wildlife resources. The Bureau of Outdoor

Recreation may help in connection with recreation developments. Other Federal and State agencies are notified by the SCS of initiation of the studies and are invited to participate.

Findings are reviewed with the local organizations at progressive stages of planning. Then a draft plan is prepared that sets forth (1) the proposed land and water resource protection and development measures, (2) the cost of the proposed measures, (3) the benefits, and (4) the cost-sharing and other arrangements for installing and maintaining the measures in the plan.

What the Plan Can Include Land Treatment

Land-treatment measures are basic to any watershed project. Structural measures cannot be fully effective unless these soil and water conservation measures are applied on individual farms and ranches, other rural land, and the public land of the watershed.

For this reason, either the law or Department of Agriculture policy requires as a condition to providing assistance for structural measures that:

1. One-half of the land above floodwater retarding dams and retention reservoirs *must* be under basic conservation plans.

- 2. Not less than 75 percent of the effective land-treatment measures must be installed or their installation provided for on those sediment-source areas that are a serious hazard to the design, operation, or maintenance of any structural measure.
- 3. Installation is assured of onfarm practices needed to realize benefits from any structural measure for drainage or irrigation.

The basic conservation plans are the same kind that farmers and ranchers make with technical help through soil and water conservation districts.

Flood Prevention

Flood prevention measures in watershed projects include landstabilization measures to prevent the destruction of land and thereby to reduce the movement of damaging amounts of sediment to stream channels and lower land. Large gullies and severely eroding land may be brought under control with vegetation or structures. banks and fills may be protected. Waterways crossing two or more farms may be improved by shaping and planting. Trees and other vegetation needed to keep the soil tied down may be protected from fire.

Flood prevention also includes waterflow and sediment control to prevent flood damage to groups of landowners, communities, and the general public.

When exceptionally heavy rainstorms sweep across a watershed, runoff may be great even from conservation-treated farm and ranch land. This is especially true if the soil is already saturated or is frozen. The damage from this surplus water can be controlled by dams to retard floodwater; stream-channel clearing, straightening, and enlarging; levees and dikes; desilting basins; floodways; floodwater diversions; and special water-holding or water-diverting terraces and dikes.

Structures for flood prevention are located and planned to—

- 1. Protect the largest possible area of land subject to flooding.
- 2. Encroach as little as possible on highly productive land.
- 3. Provide enough protection to land now subject to overflow so that owners can make full and continuous agricultural use of it, although they may have occasional damage from major storms.
- 4. Provide greater protection from major storms where human life or high nonfarm investments are subject to flood hazards.

Agricultural Water Management

Agricultural water-management measures that can be included in watershed projects are those for (1) irrigation, (2) drainage, and (3) supply and distribution of water for other agricultural uses.

The irrigation measures may include water-supply reservoirs, diversion dams, pumping plants, sluiceways, canal headworks, canal laterals, and main distribution pipelines to carry water to the farm boundary. They also may include lining canals and sealing storage reservoirs, and measures needed to conserve and use water supplies efficiently and to convey water with the least practical loss.

The drainage measures must provide for more efficient land use on existing farms and ranches. Present drainage systems may be improved. Or new drainage systems may be provided for areas now used for crops or grazing. The measures include all parts of a group drainage system, such as open ditch or tile, drops, checks, flumes, control gates, manholes, and pumping plants.

Help may be given to provide a more uniform supply and distribution of water for agricultural use to two or more landowners if the measures are part of the watershed plan. These measures will be designed to make annual streamflow more stable, to increase the recharge of ground-water reservoirs, to distribute on a community-wide basis water for livestock and other agricultural purposes.

Public Recreation Development

Developments that create or improve facilities for the enjoyment of outdoor recreation based on the use of or proximity to water in reservoirs, lakes, natural streams, or along shorelines may be included in watershed projects. Such recreation uses include fishing, hunting, swimming, boating, water skiing, picnicking, camping, and related activities.

A watershed recreational development can include (1) a single reservoir, a single lake, a single reach of shoreline, or a well-defined reach of a single perennial stream (but not the entire stream system of the watershed); (2) land required for public access and public use; and (3) minimum basic facilities such as roads and trails, parking lots, public water supply, sanitary facilities, power facilities, beach development, boat docks and ramps, plantings and other shoreline or area improvements, and picnic tables and fireplaces.

Public Fish and Wildlife Development

Water-based developments to improve the fish and wildlife habitat can also be included in watershed projects. These may involve added storage capacity in reservoirs to regulate streamflow, modification of reservoir structures for releasing

cold water, stream-channel improvement, and marshes and pits to provide breeding and nesting areas for migratory waterfowl and aquatic mammals.

Municipal or Industrial Water Supply

Developments to supply water for municipal or industrial use can be included in watershed projects. Storage capacity in reservoirs may be planned for present or future use. Pipelines conveying water from a reservoir or stream to a filter plant or distribution system may be included.

Other Measures

Watershed projects occasionally include other nonagricultural water-management measures such as storage in reservoirs for pollution abatement by streamflow regulation or saline-water-intrusion control.

WORK PLAN APPROVAL

The draft work plan is reviewed in SCS for technical adequacy and conformity with legal and policy requirements. When it is approved, the sponsoring local organizations and SCS jointly conduct an informal field review with representatives of the field offices of interested Federal and State agencies. The final plan is then prepared and signed by all the sponsoring local organizations.

If the plan does not include any single structure exceeding 2,500 acre-feet of capacity and does not involve a Federal contribution to construction costs in excess of \$250,000, the SCS State Conservationist approves the plan for the SCS. If funds are available, the Federal assistance proposed may be furnished immediately.

If, however, the plan contains provisions that exceed either of the above limitations, it must be submitted to the SCS Washington office for the following action:

- I. Submittal to the Governor of the State and to the U.S. Department of the Army, Department of the Interior, and Department of Health, Education, and Welfare, for review and comment during a 30day review period.
- 2. Approval of the SCS Administrator.
- 3. Transmittal to the Bureau of the Budget by the Secretary of Agriculture.
- 4. Transmittal to the Congress by the Bureau of the Budget.
- 5. Approval by the Committee on Agriculture and Forestry of the U.S. Senate and by the Committee on Agriculture of the House of Representatives or by the Committees on Public Works in both the Senate and House of Representatives. These committees may hold hearings on the plan and may request

testimony from representatives of the local organizations.

6. Authorization by the SCS Administrator to furnish the Federal assistance specified in the plan when funds are available.

FINANCING THE PROJECT

The SCS Administrator allocates funds for watershed projects from money appropriated each year by the Congress. Priority is given to the allocation of funds for technical assistance and engineering services. Funds for construction are allocated according to the readiness of local organizations to contract for construction.

Cost Sharing

Non-Federal Costs

Non-Federal costs include:

- 1. Installing land treatment measures on non-Federal land.
- 2. Acquiring all land rights except for public recreation or fish and wildlife development. These costs include removal, relocation, or replacement of bridges, roads, pipelines, buildings, fences or wells, whether done by the local organization or by the owners.
- 3. At least 50 percent of acquiring land rights for public recreation or fish and wildlife development.
 - 4. Acquiring water rights.
- 5. Administering contracts on non-Federal land.

- 6. All construction not allocated to (a) flood prevention (b) agricultural water management, and (c) public recreation or fish and wildlife development.
- 7. At least 50 percent of construction allocated to (a) agricultural water management, and (b) public recreation or fish and wildlife development.
- 8. Engineering and other installation services not allocated to (a) flood prevention, (b) agricultural water management, and (c) public recreation or fish and wildlife development.
- 9. At least 50 percent of the engineering and other installation services required for minimum basic facilities for public recreation or for fish and wildlife development.
- 10. Operating and maintaining works of improvement on non-Federal land.
- II. An equitable share of operating and maintaining works of improvement on Federal land in consideration of the benefits that accrue to non-Federal land.

Federal Costs

The Federal Government pays the following costs:

- 1. Technical assistance for planning and applying land treatment measures on non-Federal land.
- 2. A part of the cost, not to exceed the rate provided under other agricultural programs, for certain land-

- treatment measures when specifically authorized by the SCS Administrator.
- 3. Installation of land-treatment measures on Federal land.
- 4. All construction allocated to flood prevention.
- 5. Engineering and other services (including engineering services associated with the administration of contracts) allocated to (a) flood prevention, (b) agricultural water management, and (c) public recreation or fish and wildlife development.
- 6. Not more than 50 percent of the construction allocated to (a) agricultural water management, and (b) public recreation or fish and wildlife development.
- 7. Not more than 50 percent of the engineering and other installation services required for minimum basic facilities for public recreation or fish and wildlife development.
- 8. Not more than 50 percent of land rights required for public recreation or fish and wildlife development.
- 9. Administering contracts on Federal land when awarded by a Federal agency for works of improvement for flood prevention.

Recreation Development Limitations

Recreation developments eligible for cost sharing must be open to the public. They are limited to one in a project of less than 75,000 acres, to two in a project of 75,000 to 150,000 acres, and to three in a project larger than 150,000 acres.

Advances

After a work plan is approved, the SCS may "advance" funds to the sponsoring organizations to preserve sites for future construction. Such advances must be repaid with interest before construction. They will be processed by FHA, obligated and disbursed by SCS, and repaid to FHA.

The SCS may also advance funds to develop water supply for future municipal or industrial use up to 30 percent of the cost of any multiple-purpose reservoir. Repayment may be deferred up to 10 years without interest. Local organizations must furnish assurance that such water supply will be used and must agree to a schedule of repayment before construction.

Loans

To help the local organization pay its share of the project cost the Farmers Home Administration may make loans to the sponsoring local organization. A maximum loan of \$5 million may be made to one project for a period up to 50 years at the Federal long-term borrowing rate.

CARRYING OUT THE PROJECT

There's a job for everyone in carrying out a watershed project—the sponsoring local organizations; individual landowners; citizens of the community; local, State, and Federal agencies; and community public and private organizations and groups.

Responsibilities of the Local Organizations

The major responsibilities of the local organizations are to:

- I. Acquire land, easements, and rights-of-way needed for structures or other improvements on private land. The local organization may acquire them by purchase or gift. Included are removal, relocation, or replacement of bridges, roads, railroads, pipelines, buildings, fences, or wells, whether done by the local organization or by the owners.
- 2. Construct, or let contracts for construction, on private property.

The local organization and the SCS enter into an agreement covering each contract for construction (or for land rights for recreation or fish and wildlife development). This agreement is the basis for obligating Federal funds.

3. Obtain agreements from farmers and ranchers to plan and apply soil and water conservation measures and provide assurance of the application of a high percentage of these land-treatment measures.

4. Comply with State laws governing watershed improvements, water rights, or specifications for structures.

Information and Education

To carry out the project, all people in the watershed must be fully informed about what is being done and why and what each group's responsibilities are. This calls for a continuing program of information and education.

Technical Assistance for Land Treatment

The Soil Conservation Service gives technical assistance to land-owners who plan and apply soil and water conservation measures on their farms and ranches or other rural land. Landowners receive this assistance through soil and water conservation districts. Additional technical assistance may be given from funds appropriated under Public Law 566 only as they are required to complete land-treatment measures within the agreed-upon period for project installation.

SCS technical assistance includes:

- 1. Making a soil survey from which the land can be classified according to its capability for use and needs for treatment.
- 2. Helping landowners to plan the use and treatment of their land

in accordance with this classifica-

- 3. Aiding landowners to plan and apply soil and water conservation practices such as:
- Terraces, dams, diversions, waterways, contour farming, stripcropping, and the growing of green-manure cover crops and other vegetation needed to protect the soil from wind and water erosion and to restore, improve, and maintain soil productivity.
- Irrigation, chiseling, subsoiling and pitting, contour furrowing, water spreading, drainage, wells, ponds, and other improvements to provide and conserve water for crops, livestock, fish and wildlife, and forage production.
- Stocking rates, reseeding, erosion control, and other practices necessary to restore and improve range and permanent pastures not in national forests or managed in conjunction with national forests.
- Woodland-conservation practices that can be applied with general technical help.

The Forest Service provides the specialized technical assistance that landowners need to apply the more difficult forestry practices. This assistance usually will be made available through the State forestry agency. It includes forest protection, distribution of planting stock,

and other specialized technical aid in forest management.

The Forest Service gives necessary technical help with conservation measures needed to restore or improve privately owned rangeland within national forests. The Forest Service also gives this assistance on rangeland adjoining national forests and administered in conjunction with the forests under formal agreement with the owners or lessees.

Engineering Help With Structures

The local organization has the option of using non-Federal professional engineers or Soil Conservation Service engineers.

If the local organization requests, SCS can provide the engineering services for structural measures. These services include surveys, site investigations, layout, design, preparation of specifications, and supervision of construction of structures.

If the local organization uses non-Federal engineers satisfactory to SCS, it may be reimbursed by SCS for the cost allocated to flood prevention, agricultural water management, and recreation or fish and wildlife development. The local organization must provide or employ professional engineers for municipal or industrial water-supply development.

Other Available Help

In addition to assistance under Public Law 566, aid is available from other Federal, Federal-State, and State programs dealing with land, water, plants, recreation, and fish and wildlife.

The Soil Conservation Service uses, and encourages other agencies to use, all help available under other Federal legislation to speed the completion of watershed projects.

This help includes—

- 1. Educational assistance from the cooperative Federal-State Extension Service.
- 2. Agricultural Conservation Program cost sharing.
- 3. Credit from the Farmers Home Administration.
- 4. Farm-forestry assistance under the Cooperative Forest Management Act.
- 5. Protection of forest areas from fire, insects, and diseases under cooperative programs authorized by the Clarke-McNary Act, Forest Pest Control Act, and White Pine Blister Rust Protection Act.
- 6. Cost sharing under the Great Plains Conservation Program (Public Law 1021).
- 7. Assistance in recreation and fish and wildlife development from the Fish and Wildlife Service, the Bureau of Outdoor Recreation, and State recreation and fish and game agencies.

8. Technical, cost-sharing, and credit assistance from the U.S. Department of Agriculture authorized by the Agricultural Act of 1962 for income-producing recreation developments on rural land, the Cropland Retirement Program, Resource Conservation and Development projects, and the Rural Renewal Program.

9. Protection and treatment of Federal land in the watershed by land-managing agencies.

10. Collection of basic data by research agencies.

Public Land Improvements

The agency administering Federal land within the watershed is responsible for installing on this land the land-treatment and structural measures provided for in the watershed plan.

The State is responsible for structures and other improvements that may be needed on State-owned land within the watershed.

MAINTAINING THE PROJECT

Sponsoring local organizations are responsible for operating and maintaining all structures and developments on private land. A written agreement on maintenance

is required before Federal funds are made available for any part of the construction cost.

Structures and soil and water conservation measures on Federal land are maintained by the agency administering the land.

Soil and water conservation measures on individual farms and ranches or other rural land are maintained by the owners and operators under agreements with their local soil and water conservation district. If the watershed is outside a soil and water conservation district, the local organization must make maintenance arrangements satisfactory to SCS for fulfilling this responsibility.

Recreation Fees

The local organization may charge fees for public recreation provided such fees do not produce revenues in excess of the local organization's requirements to amortize its initial investment and provide adequate operation and maintenance.

The local organization is required to establish a schedule of maximum admission or use fees that may be charged by private concessionaires.

State Agencies Designated To Approve Applications for Assistance Under Public Law 566

ALABAMA	_State Soil Conservation Committee
ALASKA	
ARIZONA	
	State Soil and Water Conservation Commission
	_State Soil Conservation Commission
COLORADO	
	State Soil Conservation Advisory Committee
DELAWARE	
FLORIDA	
	State Soil and Water Conservation Committee
	Governor or the Board of Land and Natural Resources
	State Department of Reclamation
ILLINOIS	
	_ Department of Natural Resources
	_ State Soil Conservation Committee
KANSAS	
	_Department of Natural Resources
	_ State Soil and Water Conservation Committee
	State Soil and Water Conservation Committee
	_State Soil Conservation Committee
MASSACHUSETTS	
	State Soil Conservation Committee
	State Soil Conservation Commission
	_State Soil Conservation Committee
MISSOURI	The Governor
MONTANA	State Soil Conservation Committee
NEBRASKA	State Soil and Water Conservation Commission
NEVADA	_ State Department of Conservation and Natural Resources
	State Soil Conservation Committee
NEW JERSEY	_ State Department of Conservation and Economic Development
NEW MEXICO	_ State Engineer
NEW YORK	_ Water Resources Commission
NORTH CAROLINA	_State Soil and Water Conservation Committee
NORTH DAKOTA	_ State Soil Conservation Committee
OHIO	State Department of Natural Resources
OKLAHOMA	State Soil Conservation Board
OREGON	_State Engineer
PENNSYLVANIA	_State Soil and Water Conservation Commission
RHODE ISLAND	_State Development Council
SOUTH CAROLINA	State Department of Agriculture
	_State Water Resources Commission
TENNESSEE	State Soil Conservation Committee
TEXAS	_ State Soil and Water Conservation Board
	State Soil Conservation Committee
	_ State Water Resources Department
	State Soil and Water Conservation Commission
	_State Department of Conservation
	State Soil Conservation Committee
	State Soil and Water Conservation Committee
	State Soil and Water Conservation Committee
	Commonwealth Department of Agriculture

